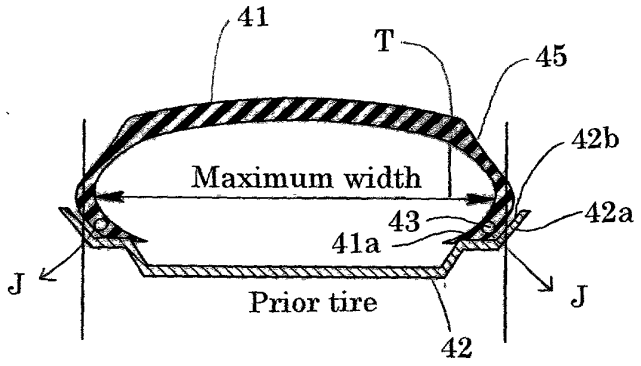
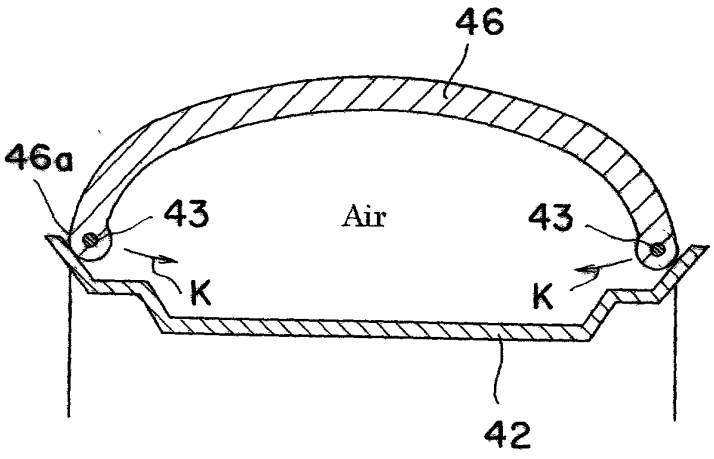
【Fig.1】

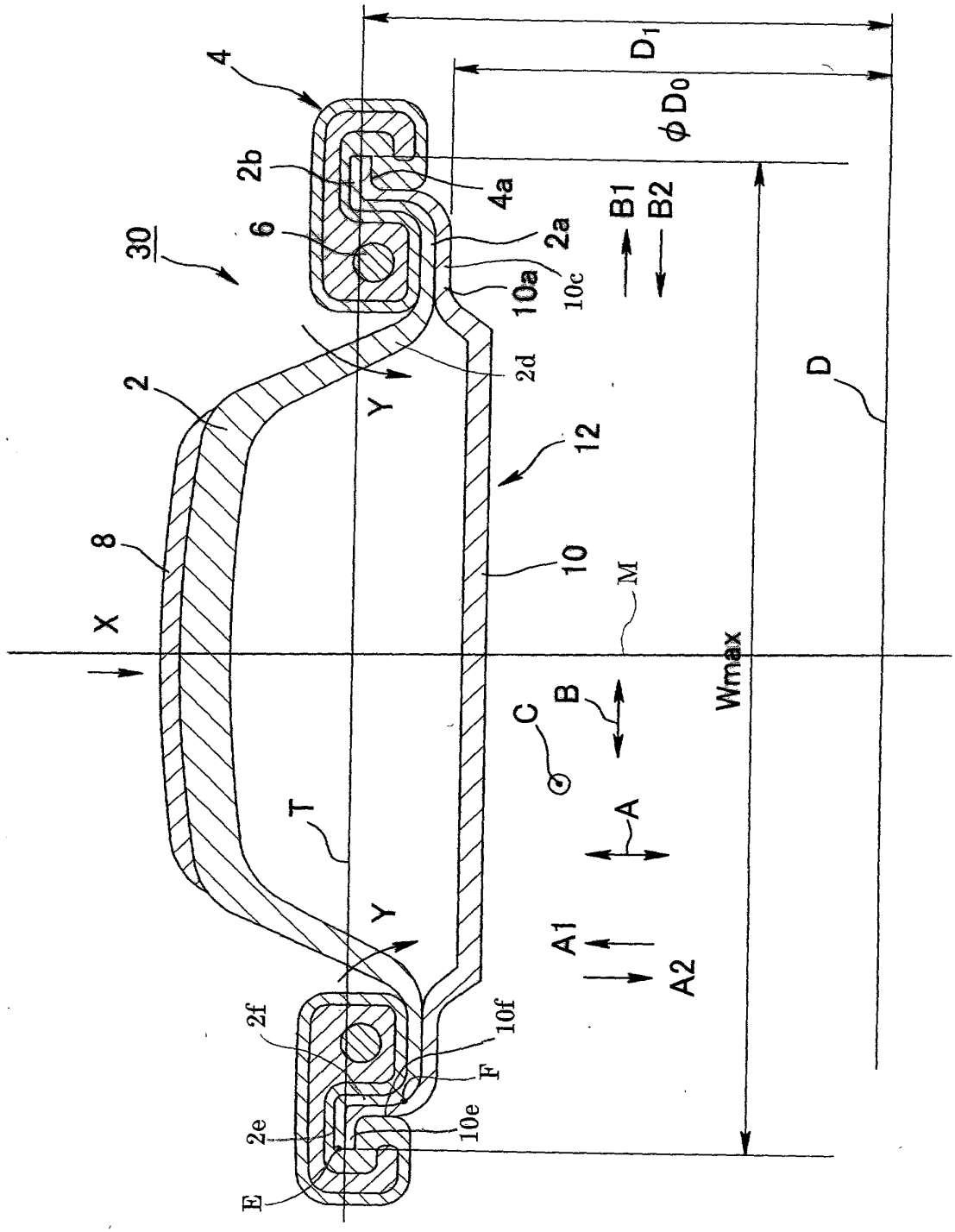
(a)


41
T
45
42b
Maximum width
43
42a
41a
J
J
Prior tire
42

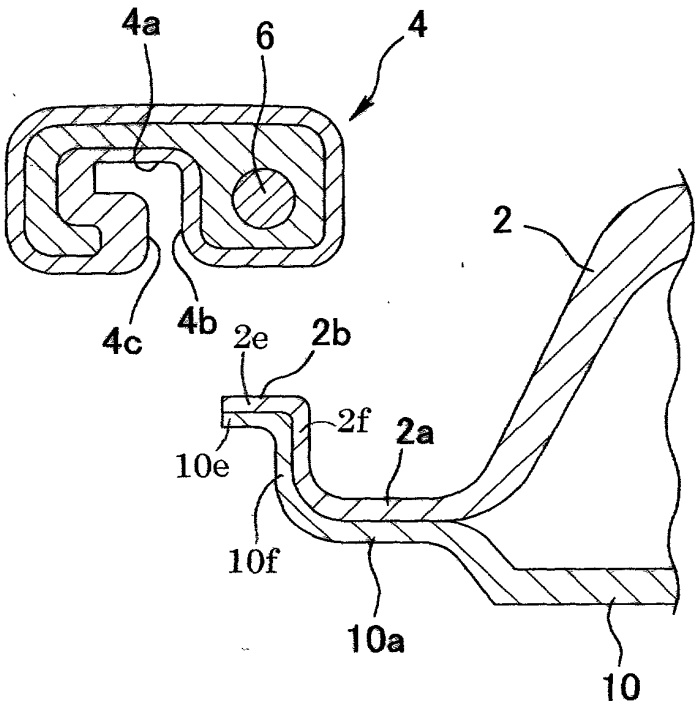
(b)


46
46a
43
Air
43
K
K
42

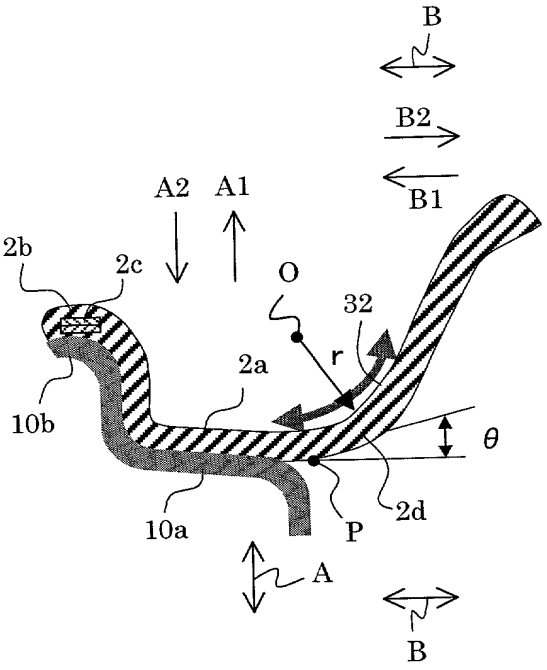
【Fig.2】


D1
φD0
4
2b
4a
30
6
2a
B1
B2
10a
10c
2d
2
Y
12
D
8
10
M
X
Wmax
C
B
T
A
A1
A2
Y
2f
10f
F
2e
10e
E

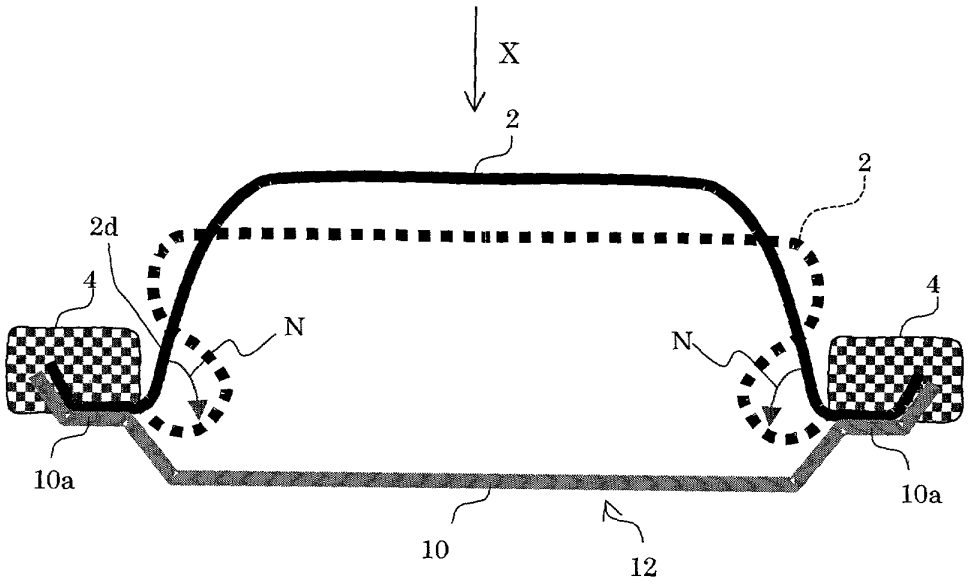
【Fig.3】



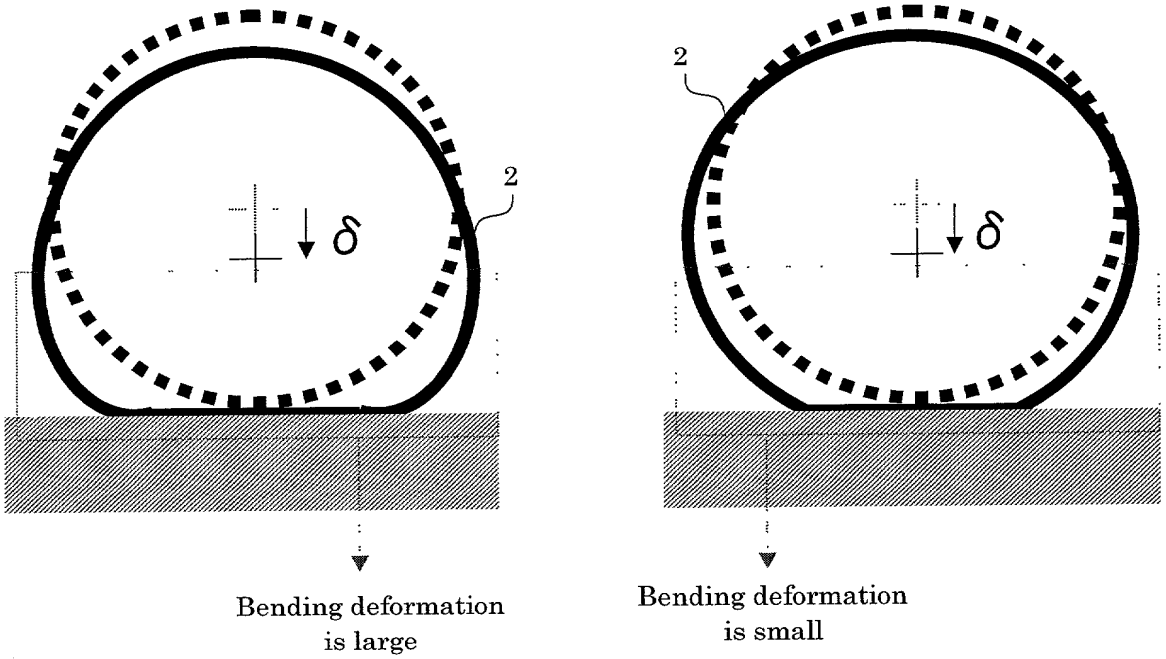
【Fig.4】



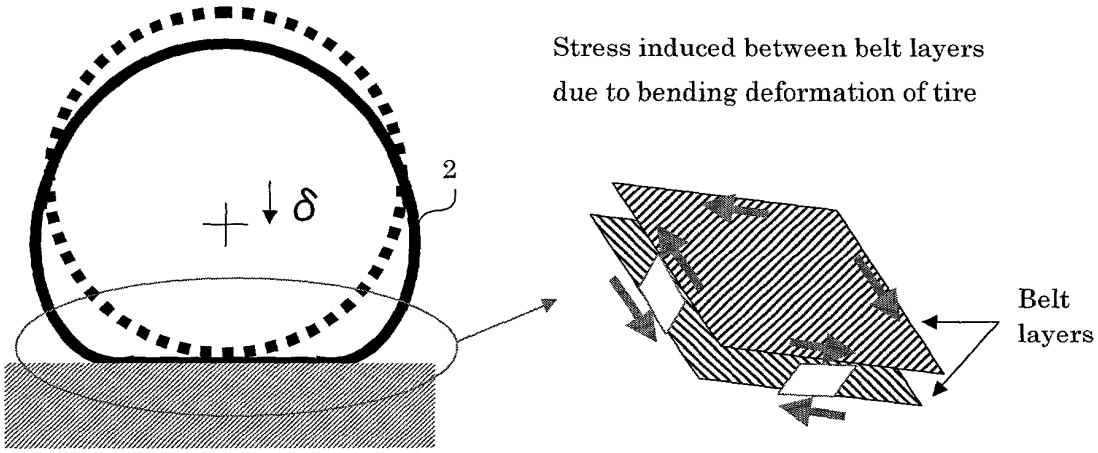
【Fig.5】



【Fig.6】


2
δ
Bending deformation is large
2
δ
Bending deformation is small

【Fig.7】



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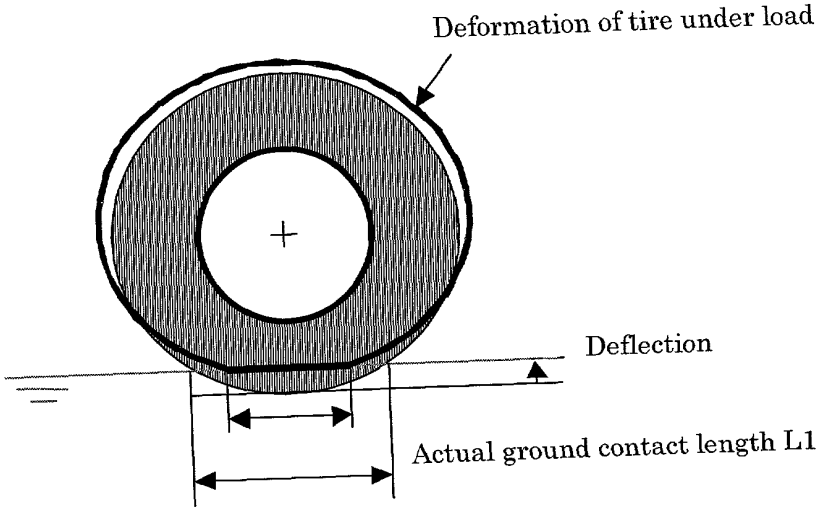
【Fig.8】

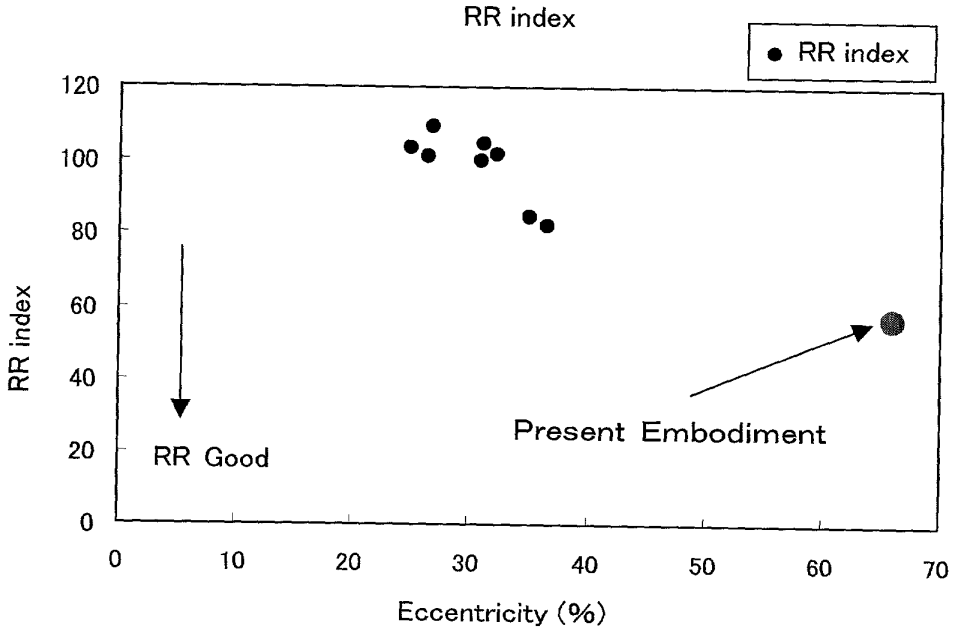


Ground contact length L0 when eccentricity is zero

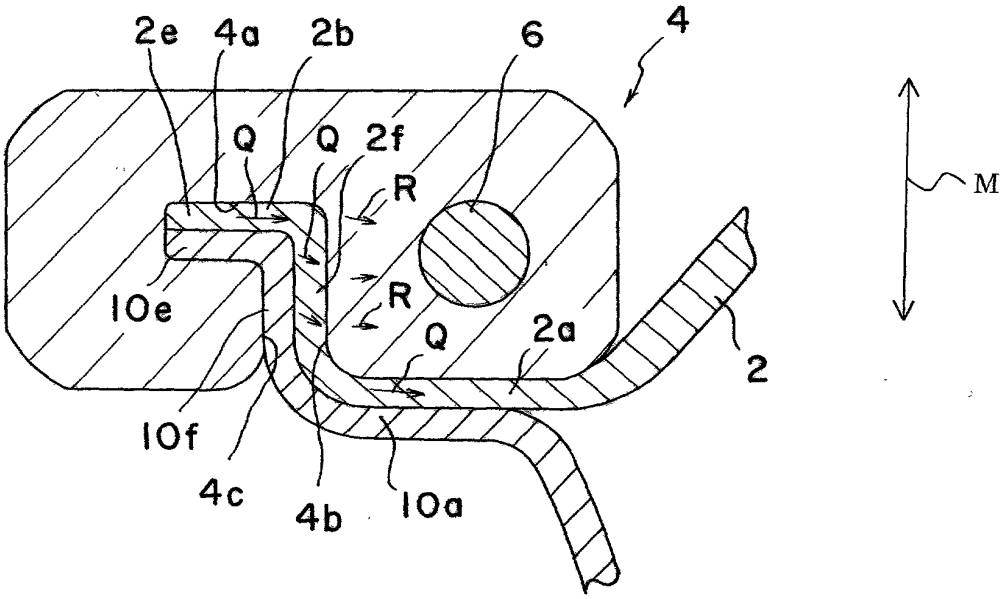
$$(\text{eccentricity}) = \frac{L0 - L1}{L0}$$

Actual ground contact length L1 is smaller than L0 (when eccentricity is zero) because of eccentricity.

【Fig.9】

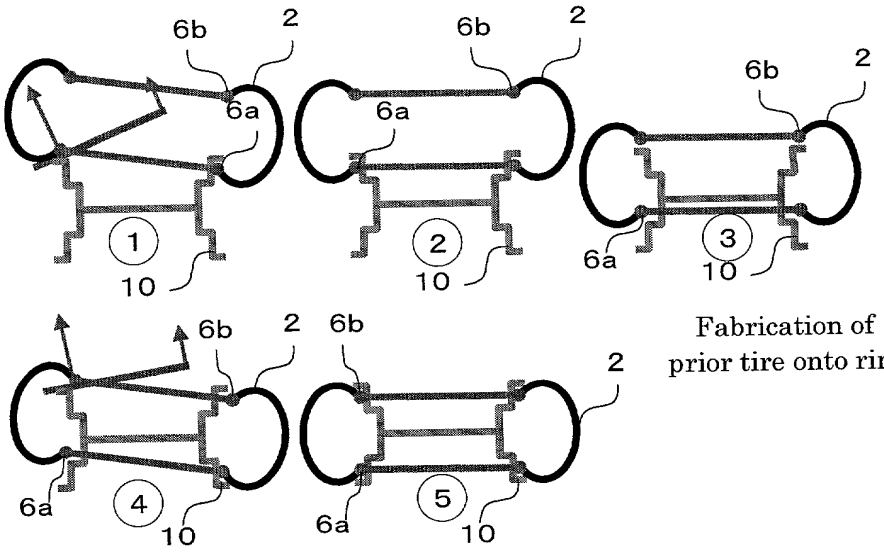

RR index
RR index
120
100
80
60
40
20
0
RR index
RR Good
Present Embodiment
0
10
20
30
40
50
60
70
Eccentricity (%)

【Fig.10】



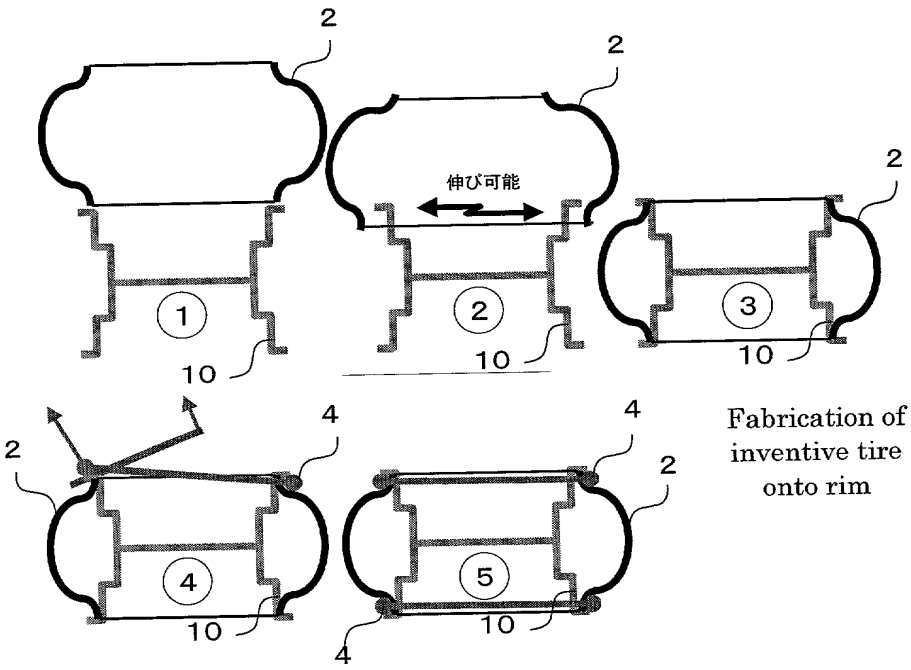
【Fig.11】

(a)



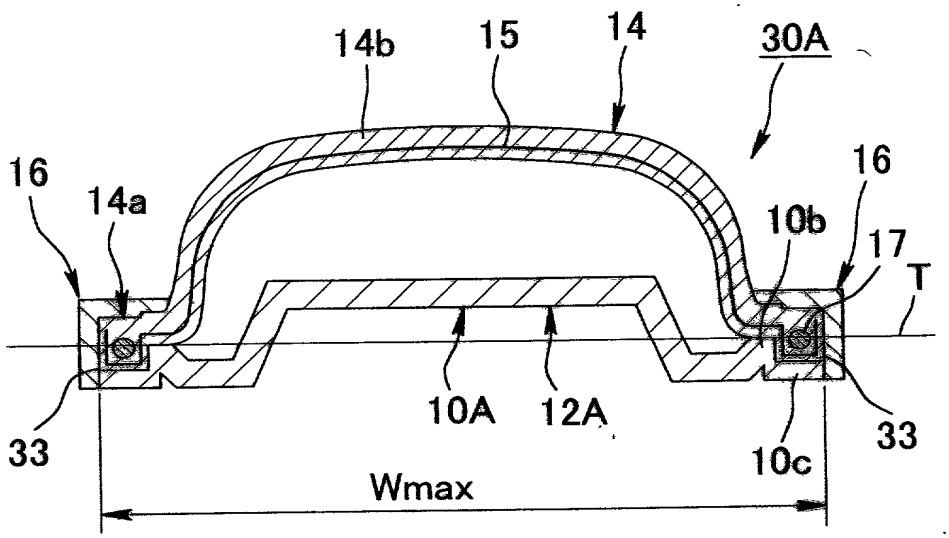
Fabrication of prior tire onto rim

(b)

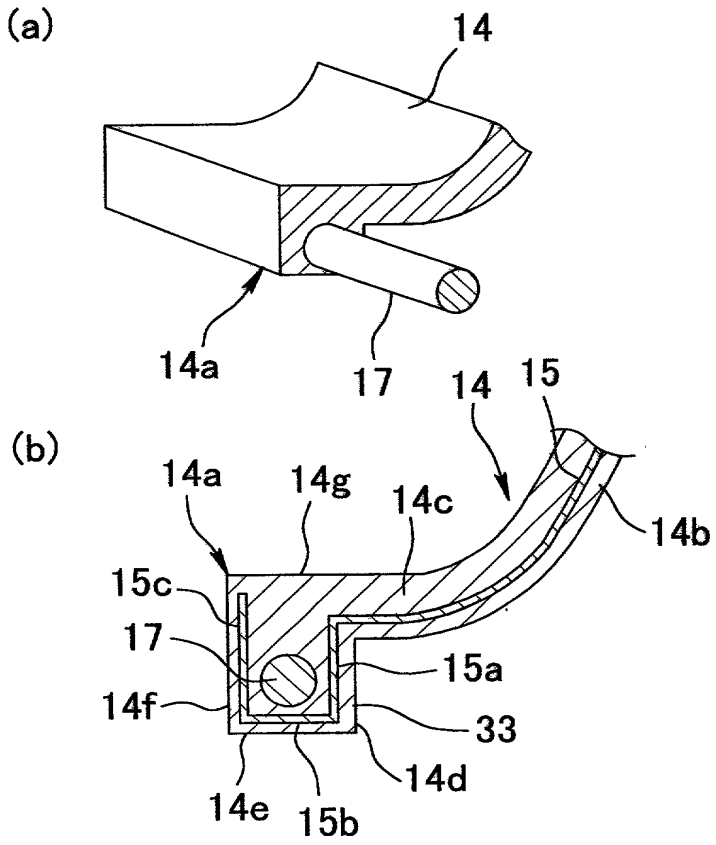


Fabrication of inventive tire onto rim

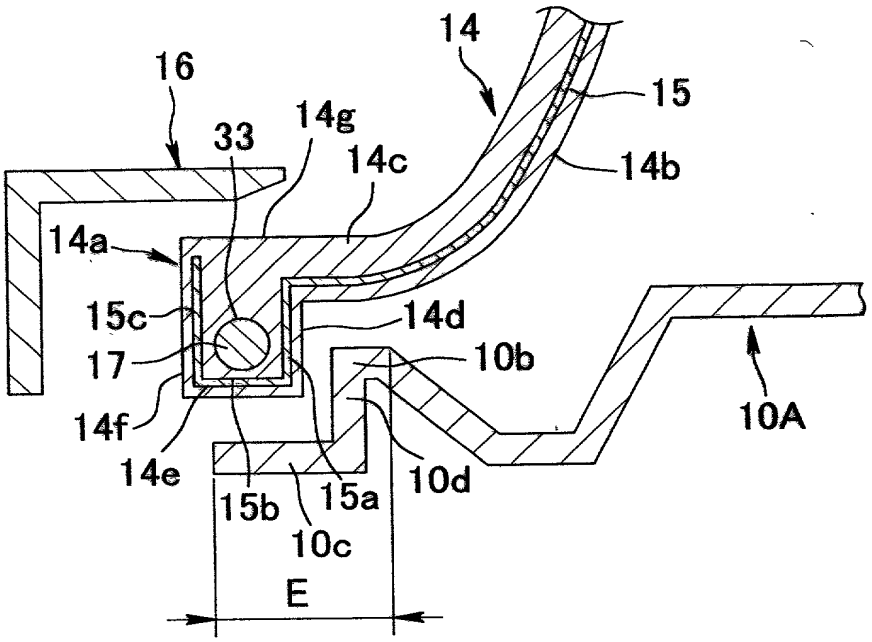
【Fig.12】



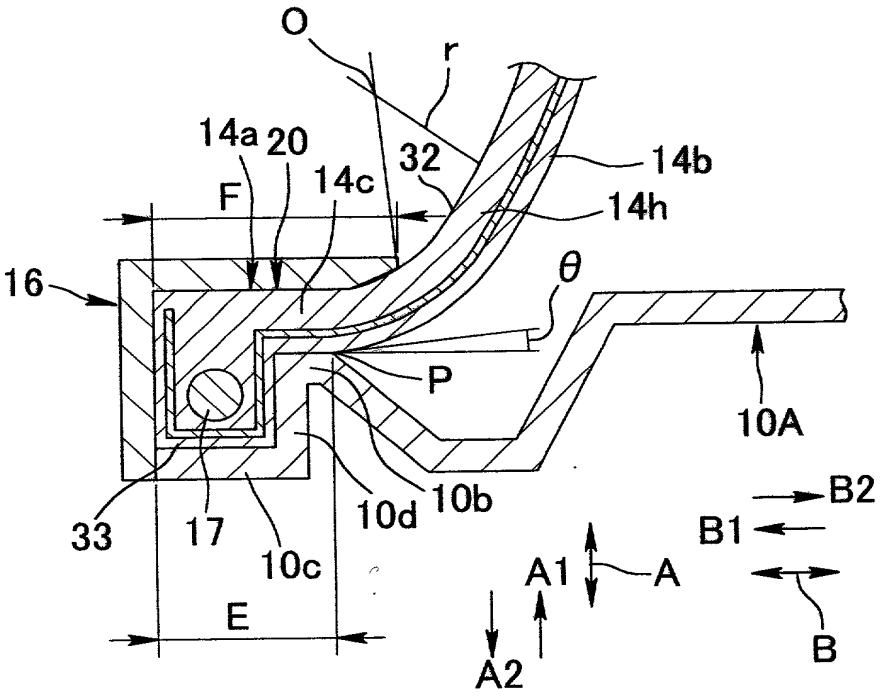
【Fig.13】



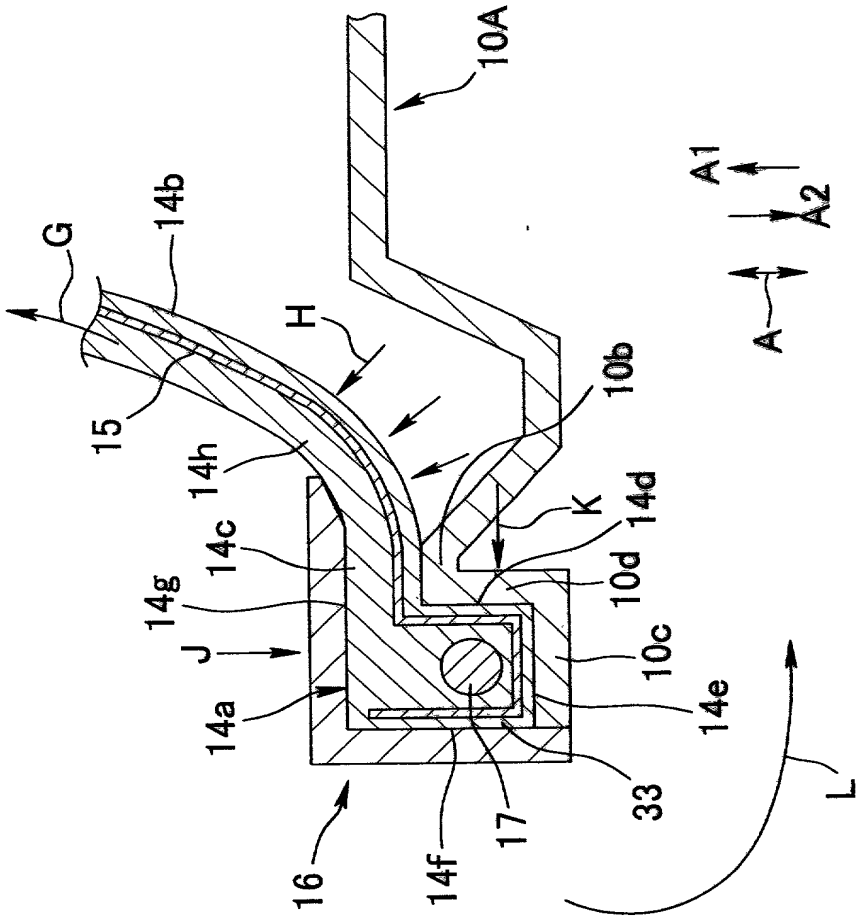
【Fig.14】


14
16
15
33
14g
14c
14b
14a
15c
14d
17
10b
10A
14f
14e
15b
15a
10d
10c
E

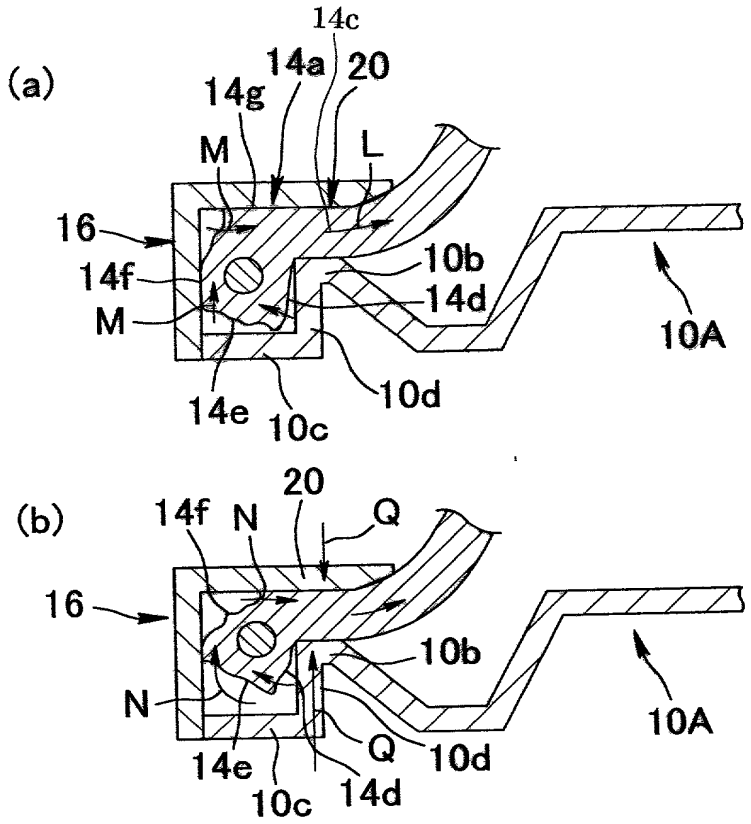
【Fig.15】


O
r
14a
20
32
14b
F
14c
14h
θ
16
P
10A
B2
B1
33
17
10d
10b
10c
A1
A
E
B
A2

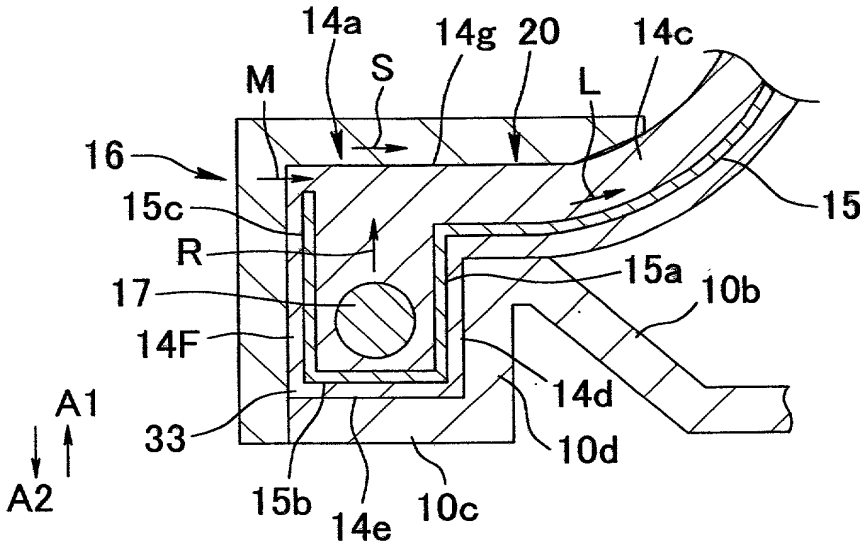
【Fig.16】


10A
A1
A2
A
G
14b
H
10b
15
14h
K
14d
14c
10d
14g
J
10c
14a
14e
33
L
16
14f
17

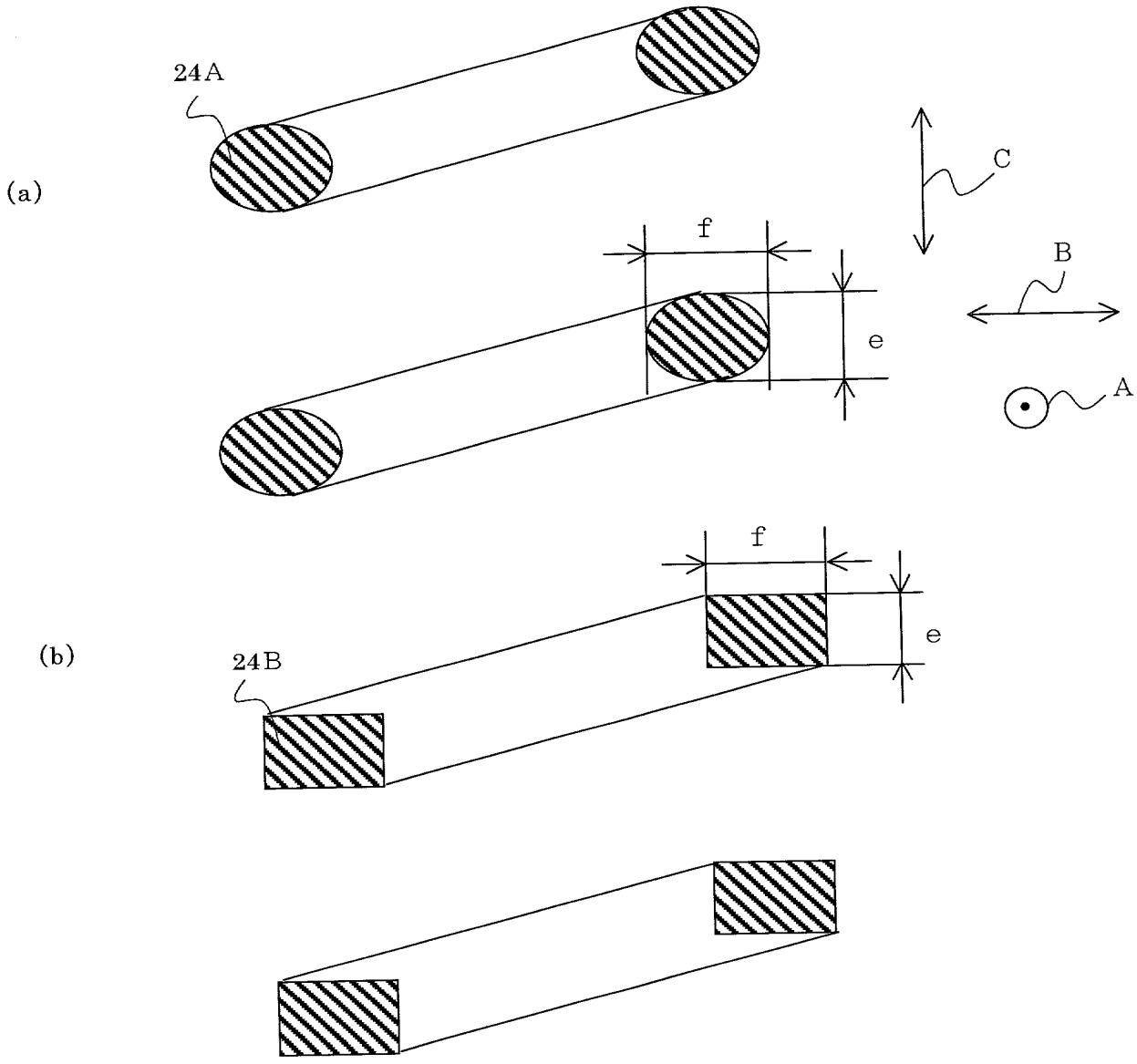
【Fig.17】


(a)
14c
14a
20
14g
M
L
16
14f
M
10b
14d
10A
14e
10c
10d
(b)
20
14f
N
Q
16
10b
N
10A
Q
14e
10d
10c
14d

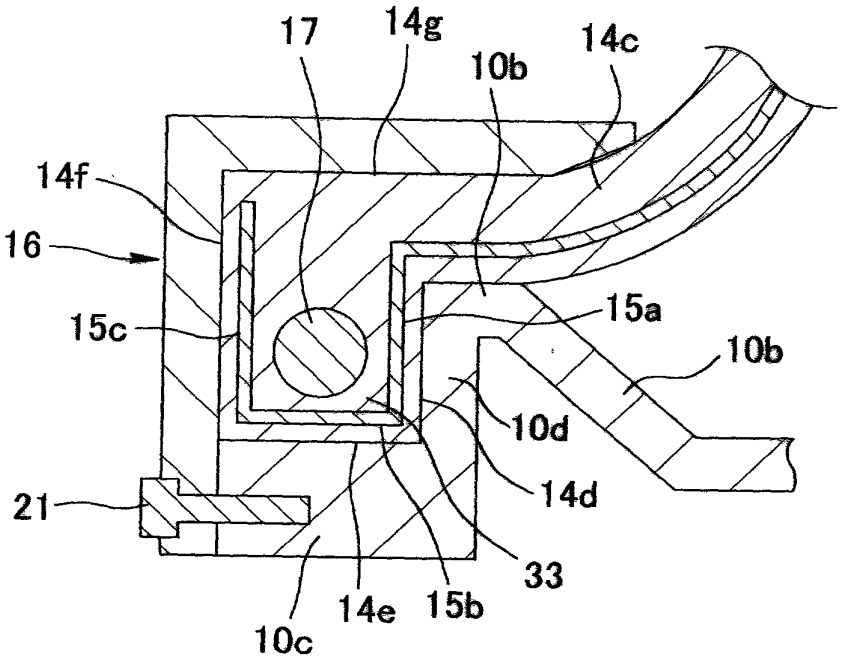
【Fig.18】


14a
14g
20
14c
M
S
L
16
15c
R
17
14F
15
15a
10b
14d
A1
A2
33
10d
15b
14e
10c

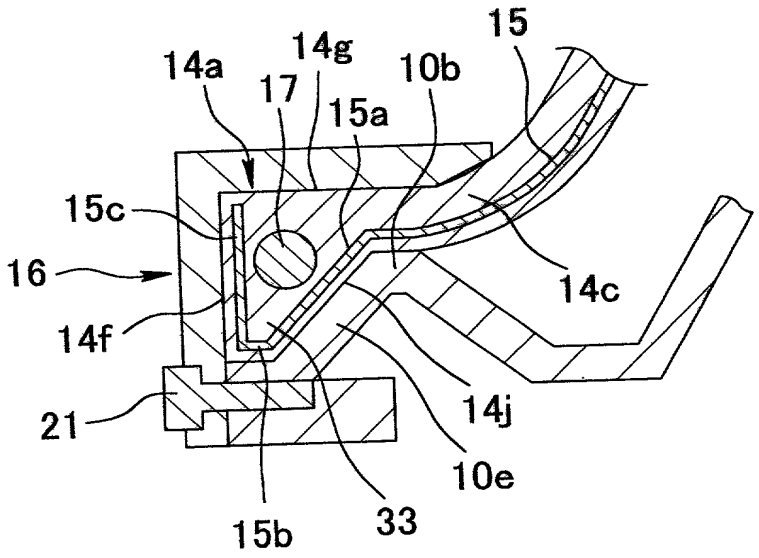
【Fig.19】



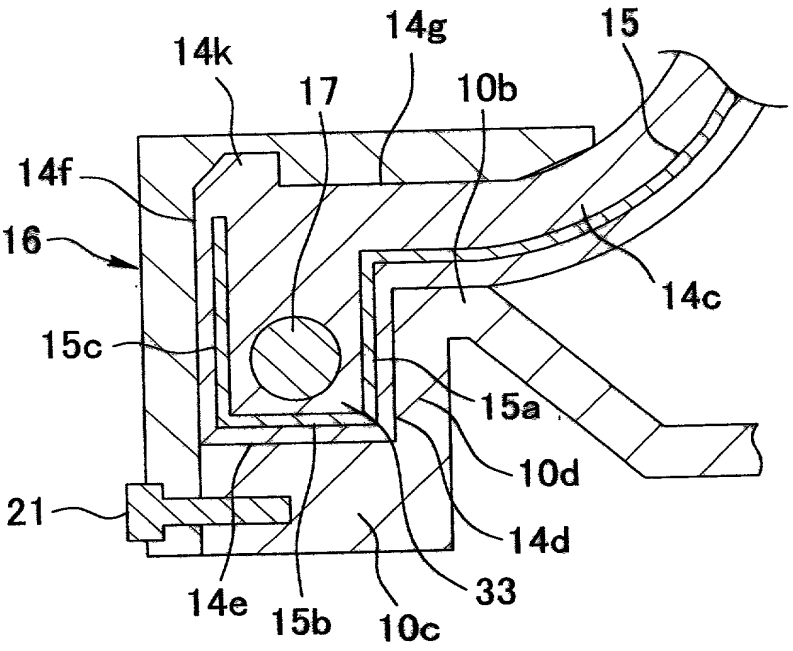
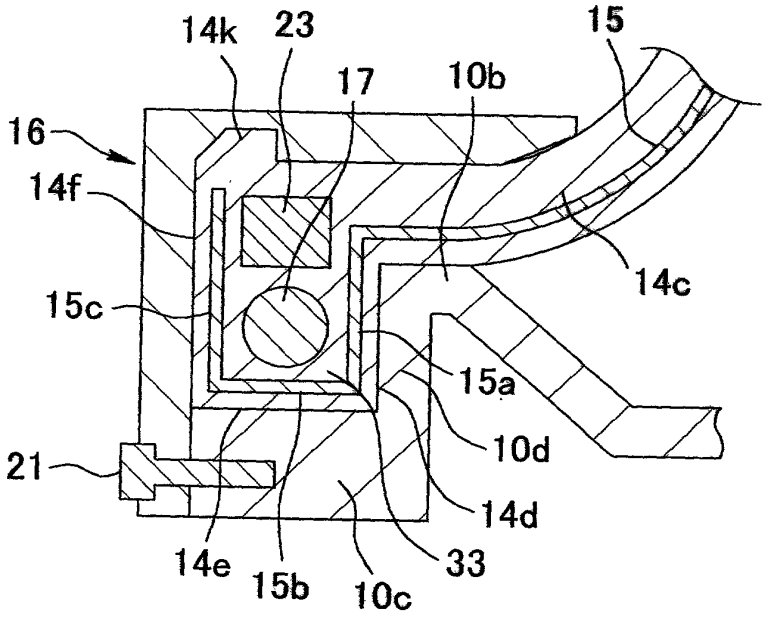
【Fig.20】



【Fig.21】



【Fig. 22】



【Fig.23】